Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-50 (cancelled)

51. (**currently amended**) A method of administering [[a]] botulinum toxin to a subject comprising

topically applying to the skin or epithelium of the subject a composition comprising [[the]] botulinum toxin ~~in conjunction with~~ and an effective amount of a positively charged carrier comprising a positively charged polymeric backbone having attached positively charged efficiency groups,

wherein the botulinum toxin is not covalently modified, and

wherein the positively charged carrier and the botulinum toxin directly contact to form a non-covalent~~ly and directly associate~~ complex.

52-53. (**cancelled**)

54. (**previously presented**) The method according to claim 51 in which the botulinum toxin is administered to achieve a desired biologic effect.

55. (**previously presented**) The method according to claim 54 in which the botulinum toxin is administered to achieve an aesthetic or cosmetic benefit.

Claims 56-63 (cancelled)

64. (**previously presented**) The method according to claim 51 in which the botulinum toxin is applied topically to the face of the subject, or to a portion thereof.

65. (**previously presented**) The method according to claim 51 in which the botulinum toxin is applied topically to the axilla of the subject, or to a portion thereof.

66. (**previously presented**) The method according to claim 51 in which the botulinum toxin is applied topically to the palms of the hands or to the feet of the subject, or to a portion thereof.

67. (**previously presented**) The method according to claim 51 in which the botulinum toxin is applied topically to the back or neck of the subject, or to a portion thereof.

68. (**previously presented**) The method according to claim 51 in which the botulinum toxin is applied topically to the groin of the subject, or to a portion thereof.

69. (**previously presented**) The method according to claim 51 in which the composition is applied topically to the hands or feet of the subject, or to a portion thereof.

70. (**previously presented**) The method according to claim 51 in which the botulinum toxin is applied topically to the elbows, upper arms, knees, or upper legs of the subject, or to a portion thereof.

71. (**previously presented**) The method according to claim 51 in which the botulinum toxin is applied topically to the buttocks of the subject or to a portion thereof.

72. (**previously presented**) The method according to claim 51 in which the botulinum toxin is applied topically to the torso of the subject or to a portion thereof.

73. (**previously presented**) The method according to claim 51 in which the botulinum toxin is applied topically to the pelvis of the subject or to a portion thereof.

Claims 74-76 (cancelled)

77. (**previously presented**) The method according to claim 51 in which the botulinum toxin is a botulinum toxin derivative.

78. (**previously presented**) The method according to claim 51 in which the botulinum toxin comprises a recombinant botulinum toxin.

79. (**currently amended**) The [[A]] method according to claim 51 in which the botulinum toxin comprises a modified botulinum toxin.

80. (**previously presented**) The method according to claim 51 in which the botulinum toxin is selected from botulinum toxin serotypes A, B, C, D, E, F and G.

81. (**previously presented**) The method according to claim 51 in which the botulinum toxin is botulinum toxin A.

82. (**previously presented**) The method according to claim 51 in which the botulinum toxin is botulinum toxin B.

83. (**previously presented**) The method according to claim 51 in which the botulinum toxin is botulinum toxin C.

84. (**previously presented**) The method according to claim 51 in which the botulinum toxin is botulinum toxin D.

85. (**previously presented**) The method according to claim 51 in which the botulinum toxin is botulinum toxin E.

86. (**currently amended**) The method according to claim 51 in which the carrier comprises a polymeric backbone having attached positively charged efficiency groups selected from -$(gly)_{n1}$-$(arg)_{n2}$ (SEQ ID NO. 1), HIV-TAT, Antennapedia PTD, and fragments of HIV-TAT or of Antennapedia PTD, in which the subscript n1 is an integer of from 0 to about 20, and the subscript n2 is independently an odd integer of from about 5 to about 25.

87. (**currently amended**) The method according to claim 86 in which the carrier comprises a polypeptide having positively charged efficiency groups selected from $-(gly)_{n1}-(arg)_{n2}$ (SEQ ID NO. 1) in which the subscript n1 is an integer of from about 0 to about 20 and the subscript n2 is independently an odd integer of from about 5 to about 25.

88. (**previously presented**) The method according to claim 87 in which the subscript n1 is an integer of from 0 to about 8.

89. (**previously presented**) The method according to claim 87 in which the subscript n1 is an integer of from about 2 to about 5.

90. (**previously presented**) The method according to claim 87 in which the subscript n2 is an odd integer of from about 7 to about 17.

91. (**previously presented**) The method according to claim 87 in which the subscript n2 is an odd integer from about 7 to about 13.

92. (**previously presented**) The method according to claim 86 in which the carrier comprises a polypeptide having attached positively charged efficiency groups selected from HIV-TAT and fragments thereof.

93. (**currently amended**) The method according to claim 92 in which the efficiency groups are positively charged HIV-TAT fragments that have the formula $(gly)_p$-

RGRDDRRQRRR-$(gly)_q$ (SEQ ID NO. 2), $(gly)_p$-YGRKKRRQRRR-$(gly)_q$ (SEQ ID NO. 3), or $(gly)_p$-RKKRRQRRR-$(gly)_q$ (SEQ ID NO. 4), wherein the subscripts p and q are each independently an integer of from 0 to 20.

94. (**previously presented**) The method according to claim 51 in which the positively charged efficiency groups comprise at least about 0.05% by weight of the total carrier weight.

95. (**previously presented**) The method according to claim 51 in which the positively charged efficiency groups comprise from about 0.5% to about 45% by weight of the total carrier weight.

96. (**previously presented**) The method according to claim 51 in which the positively charged efficiency groups comprise from about 0.1% to about 30% by weight of the total carrier weight.

97. (**previously presented**) The method according to claim 51 in which the backbone comprises a positively charged polypeptide.

98. (**previously presented**) The method according to claim 97 in which the backbone comprises a positively charged polylysine.

99. (**previously presented**) The method according to claim 98 in which the polylysine has a molecular weight of from about 10,000 to 1.5 million.

100. (**previously presented**) The method according to claim 98 in which the polylysine has a molecular weight of from about 25,000 to about 1,200,000.

101. (**previously presented**) The method according to claim 98 in which the polylysine has a molecular weight of from about 100,000 to about 1,000,000.

102. (**previously presented**) The method according to claim 51 in which the backbone comprises a positively charged nonpeptidyl carrier.

103. (**previously presented**) The method according to claim 102 in which the positively charged nonpeptidyl polymer is polyalkyleneimine.

104. (**previously presented**) The method according to claim 103 in which the polyalkyleneimine is a polyethyleneimine.

105. (**previously presented**) The method according to claim 104 in which the polyethyleneimine has a molecular weight of from about 10,000 to about 2,500,000.

106. (**previously presented**) The method according to claim 104 in which the polyethyleneimine has a molecular weight of from about 100,000 to about 1,800,000.

107. (**previously presented**) The method according to claim 104 in which the polyethyleneimine has a molecular weight of from about 500,000 to about 1,400,000.

108. (**previously presented**) The method according to claim 102 in which the botulinum toxin comprises a recombinant botulinum toxin.

109. (**previously presented**) The method according to claim 51 in which the botulinum toxin is applied in a composition having a pH of from about 4.5 to about 6.3.

110. (**previously presented**) The method according to claim 51 in which the botulinum toxin is applied in a controlled release composition.

111. (**previously presented**) The method according to claim 51 in which the botulinum toxin is contained in a liquid composition.

112. (**previously presented**) The method according to claim 51 in which the botulinum toxin is contained in a gel composition.

113. (**previously presented**) The method according to claim 51 in which the botulinum toxin is contained in a composition that is a cream, lotion or ointment.

114. (**previously presented**) The method according to claim 51 in which the botulinum toxin is contained in a composition further comprising saline.

115. (**previously presented**) The method according to claim 51 in which the botulinum toxin is contained in a composition further comprising saline and a pH buffer system.

116. (**previously presented**) The method according to claim 51 in which the botulinum toxin is contained in a device for dispensing the botulinum toxin, which device is applied topically to the skin or epithelium of the subject.

117. (**previously presented**) The method according to claim 116 in which the device is a skin patch.

Claims 118-145 (cancelled).

146. (**previously presented**) The method according to claim 51 in which the botulinum toxin comprises a fusion protein.

Claims 147 - 148 (cancelled).

149. (**previously presented**) The method according to claim 51 in which the botulinum toxin is botulinum toxin F.

150. (**previously presented**) The method according to claim 51 in which the botulinum toxin is botulinum toxin G.

151. (**previously presented**) The method of claim 51, wherein the botulinum toxin is in the form of a botulinum toxin complex.

152. (**New**) The method according to claim 98, wherein the polylysine has a molecular weight less than 75,000.

153. (**New**) The method according to claim 152, wherein the polylysine has a molecular weight less than 30,000.

154. (**New**) The method according to claim 153, wherein the polylysine has a molecular weight less than 25,000.

155. (**New**) The method according to claim 94, wherein the polymeric backbone comprises polylysine.

156. (**New**) The method according to claim 155, wherein the polylysine has a molecular weight less than 75,000.

157. (**New**) The method according to claim 156, wherein the polylysine has a molecular weight less than 30,000.

158. (**New**) The method according to claim 157, wherein the polylysine has a molecular weight less than 25,000.

159. (**New**) The method according to claim 51, wherein at least one of the efficiency groups has the formula $(gly)_p$-RGRDDRRQRRR-$(gly)_q$ (SEQ ID NO. 2) and the subscripts p and q are independently an integer in the range of 0 to 8.

160. (**New**) The method according to claim 159, wherein the polymeric backbone comprises polylysine.

161. (**New**) The method according to claim 160, wherein the polylysine has a molecular weight less than 75,000.

162. (**New**) The method according to claim 161, wherein the polylysine has a molecular weight less than 30,000.

163. (**New**) The method according to claim 162, wherein the polylysine has a molecular weight less than 25,000.

164. (**New**) The method according to any one of claims 160 - 163, wherein the botulinum toxin comprises a type A, B, C, D, E, F, or G botulinum neurotoxin.

165. (**New**) The method according to claim 164, wherein the botulinum toxin is a type A botulinum neurotoxin with a molecular weight of about 150,000.

166. (**New**) The method according to claim 51, wherein at least one of the efficiency groups has the formula $(gly)_p$-YGRKKRRQRRR-$(gly)_q$ (SEQ ID NO. 3) and the subscripts p and q are independently an integer in the range of 0 to 8.

167. (**New**) The method according to claim 166, wherein the polymeric backbone comprises polylysine.

168. (**New**) The method according to claim 167, wherein the polylysine has a molecular weight less than 75,000.

169. (**New**) The method according to claim 168, wherein the polylysine has a molecular weight less than 30,000.

170. (**New**) The method according to claim 169, wherein the polylysine has a molecular weight less than 25,000.

171. (**New**) The method according to any one of claims 167-170, wherein the botulinum toxin comprises a type A, B, C, D, E, F, or G botulinum neurotoxin.

172. (**New**) The method according to claim 171, wherein the botulinum toxin is a type A botulinum neurotoxin with a molecular weight of about 150,000.

173. (**New**) The method according to claim 51, wherein at least one of the efficiency groups has the formula $(gly)_p$-RKKRRQRRR-$(gly)_q$ (SEQ ID NO. 4) and the subscripts p and q are independently an integer in the range of 0 to 8.

174. (**New**) The method according to claim 173, wherein the polymeric backbone comprises polylysine.

175. (**New**) The method according to claim 174, wherein the polylysine has a molecular weight less than 75,000.

176. (**New**) The method according to claim 175, wherein the polylysine has a molecular weight less than 30,000.

177. (**New**) The method according to claim 176, wherein the polylysine has a molecular weight less than 25,000.

178. (**New**) The method according to any one of claims 174 - 177, wherein the botulinum toxin comprises a type A, B, C, D, E, F, or G botulinum neurotoxin.

179. **(New)** The method according to claim 178, wherein the botulinum toxin is a type A botulinum neurotoxin with a molecular weight of about 150,000.

180. **(New)** The method according to claim 51, wherein the efficiency groups attached to the polymeric backbone are present in an amount sufficient to enhance transdermal delivery of botulinum toxin relative to transdermal delivery of botulinum toxin using the same polymeric backbone but without attached efficiency groups.

181. **(New)** The method according to claim 80 in which the botulinum toxin comprises a fusion protein.